First Hit

End of Result Set

Generate Collection | Print

L4: Entry 4 of 4 File: DWPI Mar 11, 2004

DERWENT-ACC-NO: 2002-257704
DERWENT-WEEK: 200419

TITLE: Cleaning of apparatus for semiconductor production involves repeating appropriate cleaning process on parts to be cleaned until maximum acceptable impurity level is reached

Basic Abstract Text (1):
NOVELTY - A definition for a clean part including multiple maximum acceptable impurity levels is determined and a part to be cleaned is tested to determine its incoming impurity levels. An appropriate cleaning process is determined and applied to the part to be cleaned. After cleaning process, the reduced impurity level is compared with the maximum level, for repeating the cleaning process application.

Basic Abstract Text (2):
DETAILED DESCRIPTION - The impurity levels in the parts to be cleaned, is determined using surface particle test, liquid particle test, acid extraction ICP-MS techniques. INDEPENDENT CLAIMS are also included for the following:

Basic Abstract Text (3):
(a) dilute aqueous cleaning solution for parts;

Basic Abstract Text (5):
(c) process for determining contamination of an operable part;

Basic Abstract Text (6):
(d) process for cleaning ceramic parts;

Basic Abstract Text (7):
(e) process for cleaning textured quartz parts;

Basic Abstract Text (8):
(f) process for cleaning metallic impurities from textured ceramic surfaces;

Basic Abstract Text (9):
(g) process for cleaning metallic impurities;

Basic Abstract Text (10):
(h) process for determining cleanliness of semiconductor fabrication equipment parts; and

Basic Abstract Text (11):
(i) process for removing particles on a textured surface or semiconductor fabrication equipment part.

Basic Abstract Text (12):
USE - Used for cleaning semiconductor manufacturing apparatus parts such as CVD and etch chamber parts.

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Basic Abstract Text (13):
ADVANTAGE - Reduces cleaning defects by use of repeated testing of impurity levels after each pass through the cleaning process. Achieves particular impurity level goals with increased accuracy and the part can be certified to meet actual specification based on either needs for cleanliness in the semiconductor process.

Basic Abstract Text (14):
DESCRIPTION OF DRAWING(S) - The figure shows a flowchart illustrating general process guideline for cleaning semiconductor fabrication equipment parts.

Hit List

Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Search Results - Record(s) 1 through 6 of 6 returned.

☐ 1. Document ID: US 20040045574 A1

Using default format because multiple data bases are involved.

L2: Entry 1 of 6 File: PGPB Mar 11, 2004

PGPUB-DOCUMENT-NUMBER: 20040045574
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040045574 A1

TITLE: System and method for cleaning semiconductor fabrication equipment parts

PUBLICATION-DATE: March 11, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Tan, Samantha	Union City	CA	US	

US-CL-CURRENT: 134/1; 134/26, 252/79.1, 510/175

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw De

☐ 2. Document ID: US 20020066466 A1

L2: Entry 2 of 6 File: PGPB Jun 6, 2002

PGPUB-DOCUMENT-NUMBER: 20020066466
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020066466 A1

TITLE: Cleaning of semiconductor process equipment chamber parts using organic solvents

PUBLICATION-DATE: June 6, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Tan, Samantha	Union City	CA	US	

US-CL-CURRENT: 134/3; 134/105, 134/18, 134/28, 134/30, 134/35, 134/37, 134/6

ABSTRACT:

h e b b g e e e f e h ef b e

A system and method are provided for using an organic solvent to clean chamber parts used in semiconductor manufacturing. The chamber parts are exposed to the solvent using a dipping system or a vapor contact system in order to soften or dissolve the organic polymers. The solvent may be heated up to a temperature of 100.degree. C. The organic cleaning solvent may be a pyrrole-based, amine-based, fluoro/ether-based or ether-based solvent. Additionally, a system and method are provided for establishing criteria to verify that the chamber parts are clean with respect to organic, metallic and particulate impurities and establishing criteria to verify that the physical surface morphology remains intact.

3. Document ID: US 6695984 B1

L2: Entry 3 of 6 File: USPT Feb 24, 2004

US-PAT-NO: 6695984
DOCUMENT-IDENTIFIER: US 6695984 B1

TITLE: Silicon carbide sinter and process for producing the same

DATE-ISSUED: February 24, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Odaka; Fumio	Niiza			JP
Takahashi; Yoshitomo	Fujisawa			JP

US-CL-CURRENT: 252/504; 252/500, 252/516, 252/521.3, 264/625, 423/345, 423/439, 501/88, 501/92

ABSTRACT:

The present invention provides: a fabrication method of a silicon carbide sintered body, including a step of fabricating a mixed powder slurry by dissolving or dispersing silicon carbide powder, at least one organic material composed of a nitrogen source, and at least one organic material composed of a carbon source or carbon powder in a solvent, a step of fabricating a green body by pouring the mixed powder slurry into a mold and drying and a step of filling pores in the green body by immersing the green body in high purity metallic silicon that has been heated to 1450 to 1700.degree. C. in a vacuum atmosphere or inert gas atmosphere and melted, and generating silicon carbide by reacting silicon sucked up into the pores in the green body by capillary action with free carbon in the green body; and a silicon carbide sintered body obtained by a reaction sintering method, having a density of 2.90 g/cm.sup.3 or more and a volume resistivity of 10.sup.0 .OMEGA..multidot.cm or less, and containing nitrogen at 150 ppm or more.

7 Claims, 3 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 2

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4. Document ID: US 6607605 B2

L2: Entry 4 of 6 File: USPT Aug 19, 2003

US-PAT-NO: 6607605
DOCUMENT-IDENTIFIER: US 6607605 B2

TITLE: Cleaning of semiconductor process equipment chamber parts using organic solvents

DATE-ISSUED: August 19, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Tan; Samantha	Union City	CA		

US-CL-CURRENT: 134/3; 134/18, 134/19, 134/2, 134/22.1, 134/22.19, 134/26, 134/30, 134/31, 134/34, 438/905

ABSTRACT:

A system and method are provided for using an organic solvent to clean chamber parts used in semiconductor manufacturing. The chamber parts are exposed to the solvent using a dipping system or a vapor contact system in order to soften or dissolve the organic polymers. The solvent may be heated up to a temperature of 100.degree. C. The organic cleaning solvent may be a pyrrole-based, amine-based, fluoro/ether-based or ether-based solvent. Additionally, a system and method are provided for establishing criteria to verify that the chamber parts are clean with respect to organic, metallic and particulate impurities and establishing criteria to verify that the physical surface morphology remains intact.

15 Claims, 6 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 6

5. Document ID: US 6607605 B2, WO 200219390 A2, US 20020066466 A1, AU 200188629 A

L2: Entry 5 of 6 File: DWPI Aug 19, 2003

DERWENT-ACC-NO: 2002-393774
DERWENT-WEEK: 200356

TITLE: Cleaning of semiconductor fabrication equipment parts involves immersing the part into organic solvent to soften or dissolve organic polymers

INVENTOR: TAN, S; CHEN, N

PRIORITY-DATA: 2000US-229615P (August 31, 2000), 2001US-0945259 (August 31, 2001)

h e b b g e e e f e h ef b e

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
US 6607605 B2	August 19, 2003		000	C23G001/02
WO 200219390 A2	March 7, 2002	E	023	H01L000/00
US 20020066466 A1	June 6, 2002		000	B08B003/04
AU 200188629 A	March 13, 2002		000	H01L000/00

INT-CL (IPC): B08 B 3/04; C23 G 1/02; H01 L 0/00

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Drawi De

☐ 6. Document ID: US 20040045574 A1, WO 200215255 A1, AU 200186453 A, TW 495863 A, EP 1320879 A1

L2: Entry 6 of 6 File: DWPI Mar 11, 2004

DERWENT-ACC-NO: 2002-257704
DERWENT-WEEK: 200419
COPYRIGHT 2004 DERWENT INFORMATION LTD
TITLE: Cleaning of apparatus for semiconductor production involves repeating appropriate cleaning process on parts to be cleaned until maximum acceptable impurity level is reached

INVENTOR: TAN, S

PRIORITY-DATA: 2000US-224582P (August 11, 2000), 2001US-0927263 (August 10, 2001)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
US 20040045574 A1	March 11, 2004		000	B08B003/12
WO 200215255 A1	February 21, 2002	E	043	H01L021/461
AU 200186453 A	February 25, 2002		000	H01L021/461
TW 495863 A	July 21, 2002		000	H01L021/30
EP 1320879 A1	June 25, 2003	E	000	H01L021/461

INT-CL (IPC): B08 B 3/12; H01 L 21/30; H01 L 21/461

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Drawi De

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Term	Documents
CLEANING	716903
CLEANINGS	3010
(1 AND CLEANING).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	6
(L1 AND	6

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CLEANING).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.

Display Format: - Change Format

Previous Page Next Page Go to Doc#

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Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Search Results - Record(s) 1 through 2 of 2 returned.

☐ 1. Document ID: US 20040045574 A1

Using default format because multiple data bases are involved.

L6: Entry 1 of 2 File: PGPB Mar 11, 2004

PGPUB-DOCUMENT-NUMBER: 20040045574
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040045574 A1

TITLE: System and method for cleaning semiconductor fabrication equipment parts

PUBLICATION-DATE: March 11, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Tan, Samantha	Union City	CA	US	

US-CL-CURRENT: 134/1; 134/26, 252/79.1, 510/175

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw De

☐ 2. Document ID: US 20040045574 A1, WO 200215255 A1, AU 200186453 A, TW 495863 A, EP 1320879 A1

L6: Entry 2 of 2 File: DWPI Mar 11, 2004

DERWENT-ACC-NO: 2002-257704
DERWENT-WEEK: 200419

TITLE: Cleaning of apparatus for semiconductor production involves repeating appropriate cleaning process on parts to be cleaned until maximum acceptable impurity level is reached

INVENTOR: TAN, S

PRIORITY-DATA: 2000US-224582P (August 11, 2000), 2001US-0927263 (August 10, 2001)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
US 20040045574 A1	March 11, 2004		000	B08B003/12
WO 200215255 A1	February 21, 2002	E	043	H01L021/461
AU 200186453 A	February 25, 2002		000	H01L021/461

h e b b g e e e f e h ef b e

TW 495863 A	July 21, 2002		000	H01L021/30
EP 1320879 A1	June 25, 2003	E	000	H01L021/461

INT-CL (IPC): B08 B 3/12; H01 L 21/30; H01 L 21/461

Term	Documents
REDUCED	3461987
REDUCEDS	22
(5 AND REDUCED).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	2
(L5 AND REDUCED).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	2

h e b b g e e e f e h ef b e

Hit List

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Search Results - Record(s) 1 through 4 of 4 returned.

☐ 1. Document ID: US 20040045574 A1

Using default format because multiple data bases are involved.

L4: Entry 1 of 4 File: PGPB Mar 11, 2004

PGPUB-DOCUMENT-NUMBER: 20040045574
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040045574 A1

TITLE: System and method for cleaning semiconductor fabrication equipment parts

PUBLICATION-DATE: March 11, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Tan, Samantha	Union City	CA	US	

US-CL-CURRENT: 134/1; 134/26, 252/79.1, 510/175

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw D

☐ 2. Document ID: US 20020066466 A1

L4: Entry 2 of 4 File: PGPB Jun 6, 2002

PGPUB-DOCUMENT-NUMBER: 20020066466
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020066466 A1

TITLE: Cleaning of semiconductor process equipment chamber parts using organic solvents

PUBLICATION-DATE: June 6, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Tan, Samantha	Union City	CA	US	

US-CL-CURRENT: 134/3; 134/105, 134/18, 134/28, 134/30, 134/35, 134/37, 134/6

ABSTRACT:

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☐ 3. Document ID: US 6607605 B2

PGPub No. 20020066466

L4: Entry 3 of 4 File: USPT Aug 19, 2003

US-PAT-NO: 6607605
DOCUMENT-IDENTIFIER: US 6607605 B2

TITLE: Cleaning of semiconductor process equipment chamber parts using organic solvents

DATE-ISSUED: August 19, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Tan; Samantha	Union City	CA		

US-CL-CURRENT: 134/3; 134/18, 134/19, 134/2, 134/22.1, 134/22.19, 134/26, 134/30, 134/31, 134/34, 438/905

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h e b b g e e e f e h ef b e

L4: Entry 4 of 4 File: DWPI Mar 11, 2004

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DERWENT-WEEK: 200419

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INVENTOR: TAN, S

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WO 200215255 A1	February 21, 2002	E	043	H01L021/461
AU 200186453 A	February 25, 2002		000	H01L021/461
TW 495863 A	July 21, 2002		000	H01L021/30
EP 1320879 A1	June 25, 2003	E	000	H01L021/461

INT-CL (IPC): B08 B 3/12; H01 L 21/30; H01 L 21/461

Term	Documents
DETERMINING	1066128
DETERMININGS	16
(3 AND DETERMINING).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	4
(L3 AND DETERMINING).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	4

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